MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Waste and Underground Tank Management Bureau
Solid Waste Section
PO Box 200901
Helena, MT 59620-0901

FINAL ENVIRONMENTAL ASSESSMENT (EA)

SECTION 1.0 – SOLID WASTE SECTION ROLES AND RESPONSIBILITIES:

The Department of Environmental Quality's (DEQ), Solid Waste Section (SWS), is responsible for ensuring activities proposed under the Solid Waste Management Act, the Septage Disposal Licensure Act, the Integrated Waste Management Act, and the Motor Vehicle Disposal & Recycling Act are in compliance with current regulations. A land application site must first be approved by the county in which the site is located before the request for approval is submitted to the SWS for review and approval. Each licensee is responsible for following the Administrative Rules of Montana (ARM) for Cesspool, Septic Tank, and Privy Cleaners as well as other restrictions and requirements put in place by the county in which the land application site is located.

Purpose of the Environmental Assessment:

In accordance with 75-1-102, Montana Code Annotated (MCA), the Montana Environmental Policy Act (MEPA) is procedural and requires the "adequate review of state actions in order to ensure that environmental attributes are fully considered by the legislature in enacting laws to fulfill constitutional obligations; and the public is informed of the anticipated impacts in Montana of potential state actions." According to MEPA, EAs are the procedural documents that communicate the process agencies follow in their decision making. An EA does not result in a certain decision; but rather, it serves to identify the potential effect of a state action within the confines of existing laws and rules governing such proposed activities so that agencies make balanced decisions. The MEPA process does not provide regulatory authority beyond the authority explicitly provided in the existing statute.

The Septage Disposal and Licensure regulations establish the minimum requirements for the land application of septage wastes. The EA is the mechanism that DEQ uses to: 1) Disclose whether a proposed land application site meets the minimum requirements for compliance with the current laws and rules; 2) Assist the public in understanding the licensing laws of the Septage Disposal and Licensure program; 3) Identify and discuss the potential environmental effects of the proposed land application activity if it is approved and becomes operational; 4) Discuss actions taken by the applicant and the enforceable measures and conditions of the license designed to mitigate the effects identified by DEQ during the review of the application; and 5) Seek public input to ensure DEQ has identified all the substantive environmental effects associated with the proposed land application of septage, portable toilet waste, and graywater at the proposed location.

Benefits and Purpose of Project:

Septage is the liquid and solid material removed from a septic tank, cesspool, portable toilet, or similar treatment works that receives only waste and wastewater from humans or household operations. The land application of septage is an economical and environmentally sound practice. When properly managed, septage is a resource. When used as a soil conditioner, septage contains nutrients that can

reduce the reliance on chemical fertilizers for agriculture. A properly managed land application program recognizes the benefits of septage and employs practices to maximize the value of the material. Land application of septage benefits agricultural land by the addition of moisture, organic matter, and nutrients to the soil and does not adversely affect public health. When the septage is being applied as a soil conditioner, the use is considered an application rather than a disposal because the materials in the septage benefit the soil by adding nutrients, moisture, and improving the soil tilth. This will help improve growth of crops or grasses grown on the site.

SECTION 2.0 – PROJECT DESCRIPTION:

Bryce Lawrence of B&B Pumping (applicant) has submitted an application for DEQ's approval of a new site for the land application of septage, portable toilet waste, sump pumpings, and graywater. The site is located on approximately two acres of S+J Cattle LLC property in Valley County. At the present time, the property is used for the production of dryland pasture grass. The applicant will use the site only as needed for the land application of no more than 15,000 gallons of septage and 4,000 gallons of portable toilet waste annually. This site will be used as an alternative land application site when the Valley County landfill is inaccessible on wet or closed days. The location for this land application site was selected solely by the applicant and it is the purpose of this environmental assessment to determine if the application for this site meets the requirements of the Septage Disposal and Licensure Laws.

Site Location:

The land application site is located on private property in Section 33, Township 29 North, Range 39 East, Montana Principal Meridian, Valley County, Montana (Figure 2.1). As shown in Figure 2.2, the area to be used for land application within Section 33 has been divided into two separate sites. Land application is proposed in the SW ¼ of the NE ¼ of Section 33, T29N, R39E. Figures 2.4 through 2.8 provide photographs of the area proposed for land application that were taken during DEQ's site visit.

The site is approximately three miles north of the City of Glasgow off of Jensen Trail. The City of Glasgow is located in northeastern Montana, approximately 17 miles northwest of the junction of the Milk and Missouri Rivers. The city is situated on the northern bank of the Milk River in what is known as the Great Plains region of North America (Figure 2.3 & Figure 2.4).

Figure 2.1: Proposed Land Application Site Location

Figure 2.2: Map of Land Application Site Boundaries (outlined in red).

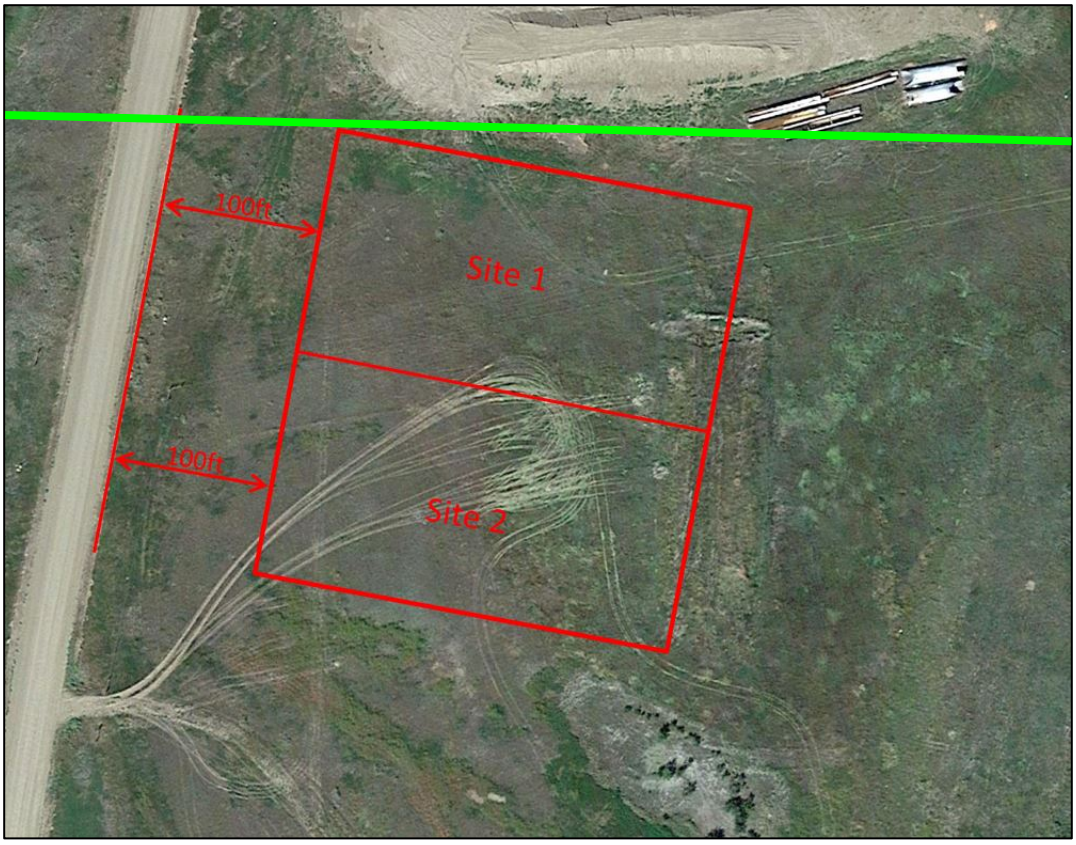


Figure 2.3: Site Location in regards to the State of Montana (Circled in Red)

Figure 2.4: Site Location in regards to Glasgow, MT (Circled in Red)

https://mtdeq.maps.arcgis.com/

Figure 2.5: Entrance to Site facing East.

Figure 2.6: Site facing Southeast

Figure 2.7: Site facing East

Figure 2.8: Site taken from north side of fence facing South

Site Setback Requirements:

The applicant will maintain the setbacks during all land application activities according to the requirements of ARM 17.50.809. The setback requirements, provided in Table 2.1, prohibit the application of pumpings within 500 feet of an inhabitable building, 150 feet of any state surface water, including wetlands and intermittent drainages, 100 feet of any county-maintained road, and 100 feet of any drinking water source. Land application is also prohibited on slopes greater than 6%, as well as where the seasonally high groundwater is six feet or less below the ground surface.

Table 2.1: Land Application Site Setback Requirements

ARM Reference	Setback Requirements
17.50.809(1)	Pumpings may not be applied to land within 500 feet of any occupied or inhabitable building.
17.50.809(2)	Pumpings may not be applied to land within 150 feet of any state surface water, including ephemeral or intermittent drainages and wetlands.
17.50.809(3)	Pumpings may not be applied to land within 100 feet of any state, federal, county, or city-maintained highway or road.
17.50.809(4)	Pumpings may not be applied to land within 100 feet of a drinking water supply source.
17.50.809(6)	Pumpings may not be applied to land with slopes greater than 6%.
17.50.809(8)	Pumpings may not be applied to land where seasonally high ground water is 6 feet or less below ground surface.

Figure 2.9 provides an aerial view of the land application site depicting the setbacks from the nearby homes and a seasonal water feature located on site. The location of the land application site meets setback requirements according to ARM 17.50.809. If homes are constructed in the future that are located within 500 feet of the land application site boundaries, the land application site boundaries will be relocated to comply with these setback requirements.

Figure 2.9: Site with Setbacks

<u>Site Operation and Maintenance Requirements</u>:
The land application of septage and graywater is considered the beneficial use of a waste product when the material is applied in accordance with the regulations governing land application. The operational requirements for a land application site, outlined in Table 2.2, include: the removal of all non-putrescible litter within six hours of application; the prohibition of septage application on frozen, flooded, or snow-covered ground if the pumpings may enter state waters; and the application at a rate not exceeding the nitrogen requirement of the grasses grown on site. Pumpings must also be either injected below the land surface, incorporated within six hours of application, or pH adjusted for at least 30 minutes prior to land application.

Table 2.2: Land Application Site Operational Requirements

ARM Reference	Site Restrictions/Requirements
17.50.809(10)	All non-putrescible litter must be removed from the land application site within 6 hours of application.
17.50.809(12)	Pumpings may not be applied at a rate greater than the annual application rate (AAR) of the site for crop nitrogen requirement on an annual basis.
17.50.810(1)	Pumpings may not be applied to flooded, frozen, or snow covered ground if the pumpings may enter state waters.
17.50.811(3)	Pumpings may be applied only if the person first performs one of the following vector attraction and pathogen reduction methods: • injection below the land surface so no significant amount remains on the land surface within one-hour of injection; • incorporation into the soil surface plow layer within 6 hours of application; • addition of alkali material so that the pH is raised to and remains at 12 or higher for a period of at least 30 minutes; or, • management as required by 17.50.810 when the ground is frozen

The sites available for land application will be rotated on an annual basis, so that a parcel used for land application one year will be inactive the next year. This rotation allows the vegetation or crop of choice to utilize the nitrogen and other nutrients added from the land application process. In this case, the landowner currently uses the property for the production of pasture grass. The rules do not require the harvesting of a crop or vegetation from the site, but rather that vegetation be grown that will utilize the nitrogen that has been applied during the land application process.

Septage will be land applied using a splash plate to disperse the waste in a wide, thin, even layer at a beneficial rate. Septage will be incorporated into the soil surface plow layer with a tractor and tillage equipment within six hours of application. Septage may be applied on frozen or snow covered ground only if no other reasonable treatment method is available. Reasonable treatment method options include hauling the waste to a wastewater treatment plant or to a septage storage, treatment, or dewatering facility that will accept the waste and that is within 25 miles of the point of generation. If application to frozen or snow covered ground is necessary, pumpings may only be land applied on sites that have a slope of less than or equal to 3%, where the land is not within a 100-year floodplain, and when the waste is either alkali-stabilized immediately or incorporated into the soil as soon as the weather permits.

Land application will occur as needed at a rate not exceeding the Annual Application Rate (AAR) in gallons per acre. For septage and portable toilet waste, the AAR is calculated based upon the production of a specific crop or grass, as follows:

AAR = Crop Nitrogen Requirement/0.0026 for septage waste.
AAR = Crop Nitrogen Requirement/0.0052 for portable toilet waste.

The pasture grass at this location has a nitrogen requirement of 75 pounds/acre. The resulting AAR for septage is 28,846 gallons per acre, and is equal to approximately 1.06 inches of liquid applied per acre per year. The resulting AAR for portable toilet waste is 14,423 gallons per acre, and is equal to approximately 0.53 inches of liquid applied per acre per year. For comparison, the average annual precipitation received during the month of August is approximately equal to the volume of septage that

would be land applied per acre per year at the proposed site (Table 2.3). The combined average annual precipitation received during the months of March and April is approximately the same amount of portable toilet waste that would be land applied per acre per year (Table 2.3). As the applicant has proposed, the annual volume of septage waste will not exceed 15,000 gallons per year and the annual volume of portable toilet waste will not exceed 4,000 gallons per year. The proposed land application site would accommodate the proposed volumes and land application activities will not result in an exceedance of the AAR.

Land application will be limited to only the areas approved by DEQ. B&B Pumping will establish the approved boundaries of the land application site with either flags, stakes, or rock cairns to ensure wastes are applied only in the approved areas. The site will not be used until the boundaries have been placed and approved by either DEQ or the local county sanitarian.

Site Climate:

The climate in the area for land application is typical of the semi-arid regime in the Glasgow area. Table 2.3 provides a summary of monthly climate information. The winters in the Glasgow area are long and moderately snowy; the summers are hot and dry. The average annual precipitation is approximately 11.14 inches. The majority of precipitation falls during the months of May through August, while February is the driest month. The annual snowfall is 30.1 inches, with January having the most snowfall.

Table 2.3: Monthly Climate Summary

GLASGOW WSO AIRPORT, MONTANA (Stn. 243558) *Period of Record: 11/1/1955 to 12/31/2005*													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	20.5	27.6	40.1	56.2	67.7	76.7	84.5	83.7	71.2	58.0	39.0	26.4	54.3
Average Min. Temperature (F)	1.6	8.1	19.0	31.6	42.4	51.4	56.9	55.6	44.4	33.1	18.6	7.2	30.8
Average Total Precipitation (in.)	0.37	0.28	0.40	0.77	1.61	2.42	1.78	1.29	0.87	0.63	0.38	0.34	11.14
Average Total Snow Fall (in.)	7.1	4.1	4.3	2.5	0.9	0.0	0.0	0.0	0.2	1.1	4.1	5.8	30.1
Average Snow Depth (in.)	4	4	2	0	0	0	0	0	0	0	1	2	1

Percent of possible observations for period of record.
Max. Temp.: 100% Min. Temp.: 100% Precipitation: 100% Snowfall: 99.8% Snow Depth: 99.9%
Check Station Metadata or Metadata graphics for more detail about data completeness.

SECTION 3.0 – ALTERNATIVES CONSIDERED:

The following provides a description of reasonable alternatives whenever alternatives are reasonably available and prudent to consider:

A decision by DEQ is triggered when the applicant upholds the request for approval of the proposed activity at the proposed location. The applicant, however, may at any time choose to withdraw the application. This would result in DEQ selecting the "no-action" alternative, because a DEQ decision would not be necessary. If the applicant withdraws the application, the applicant could seek to locate a land application site elsewhere.

Alternative A: The "no action" alternative. This alternative will be implemented when a final decision by DEQ is not required because the applicant has withdrawn the application for approval of the land application site.

Alternative B: The 'license application denied' alternative. This alternative will be implemented if the application does not meet the minimum requirements of the Septage Disposal Licensure Act and could not continue to be processed as submitted. If denied, the applicant may modify the application for the current site and reapply for licensure, or could locate, investigate, and apply for licensure of another site.

Alternative C: The 'license application approved' alternative. This alternative will be implemented when DEQ approves the application for licensure of the new disposal site if the application meets the requirements of the Septage Disposal Licensure Act.

In consideration of these alternatives, DEQ has not received a request by the applicant to withdraw the application for licensure. DEQ has determined the application meets the requirements of the Septage Disposal and Licensure Laws. Therefore, the potential environmental effects of Alternative C were evaluated for the proposed project based on the information provided in the application, DEQ's research on the site and the area surrounding the proposed site, and DEQ's site visit. The results of DEQ's evaluation of potential environmental effects related to the proposed land application site are summarized in Section 4.0.

SECTION 4.0 - EVALUATION OF POTENTIAL EFFECTS

Tables 4.1 and 4.3 of this section identify and evaluate the potential environmental effects that may occur to human health and the environment if the land application site is approved. The discussion of the potential impacts only includes those resources potentially affected. If there is no effect on a resource, it may not be mentioned in the analysis.

Direct and indirect impacts are those effects that occur in or near the proposed project area and might extend over time. Often, the distinction between direct and indirect effects is difficult to define, so in the following discussion, impact or effect means both types of effects.

Table 4.1: Potential Impacts of the Proposed Land Application Site on the Physcial Environment

PHYSICAL ENVIRONMENT	Major	Moderate	Minor	None	Unknown	Attached
1. Terrestrial, Avian, and Aquatic Life and Habitats				✔		✔
2. Water Quality, Quantity, & Distribution				✔		✔
3. Water Quality, Quantity, & Distribution				✔		✔
4. Soil Quality, Stabiltiy, & Moisture			✔			✔
5. Vegetation Cover, Quantity, & Quality			✔			✔
6. Aesthetics				✔		✔
7. Air Quality				✔		
8. Unique, Endangered, Fragile, or Limited Environmental Resources				✔		✔
9. Historical an dArchaeological Sites				✔		
10. Demands on Environmental Resources on Land, Water or Energy				✔		

Analysis of Table 4.1: Potential Impacts of the Proposed Land Application Site on the Physcial Environment

This section evaluates the potential environmental effects that may occur on the physical environment if the proposed land application site is approved. The number on each of the underlined resource headings corresponds to the resource listed in the table. Generally, only those resources potentially affected by the proposal are discussed. Therefore, if there is no effect on a resource, it may not be discussed.

1.0 Terrestrial, Avian, and Aquatic Life and Habitats

There are no wetlands or permanent surface water bodies located on the proposed site. Because no continuously active aquatic systems exist within the boundary of the proposed site, it is unlikely that there is any significant aquatic life or habitat anywhere on the site. Therefore, there is no anticipated impact to aquatic species.

An intensive survey was not performed to verify the presence of or impact to terrestrial or avian species within the land application site. However, because the site is used as a dryland pasture, it is unlikely that any terrestrial or avian species reside permanently on the site. Therefore, there is no additional anticipated impact to terrestrial or avian species from the proposed land application activities.

2.0 Water Quality, Quantity, and Distribution

Surface Water

The proposed land application site is located in northeastern Montana and sits northwest of the City of Glasgow. Glasgow is located in what is considered to be the Milk River flood plain. The floodplain is bordered by poorly defined benches, which are covered with glacial deposits and dissected by numerous drainages. The main drainage in the vicinity of the project is Cherry Creek, which feeds into the larger Milk River. Surface water drainage from the proposed land application area is generally towards the south, but the site is located up on a large bench. The landscape slopes generally from the southwest to the southeast, but the nearest water source, Cherry Creek, is 0.40 miles to the southeast(Figure 4.1). No

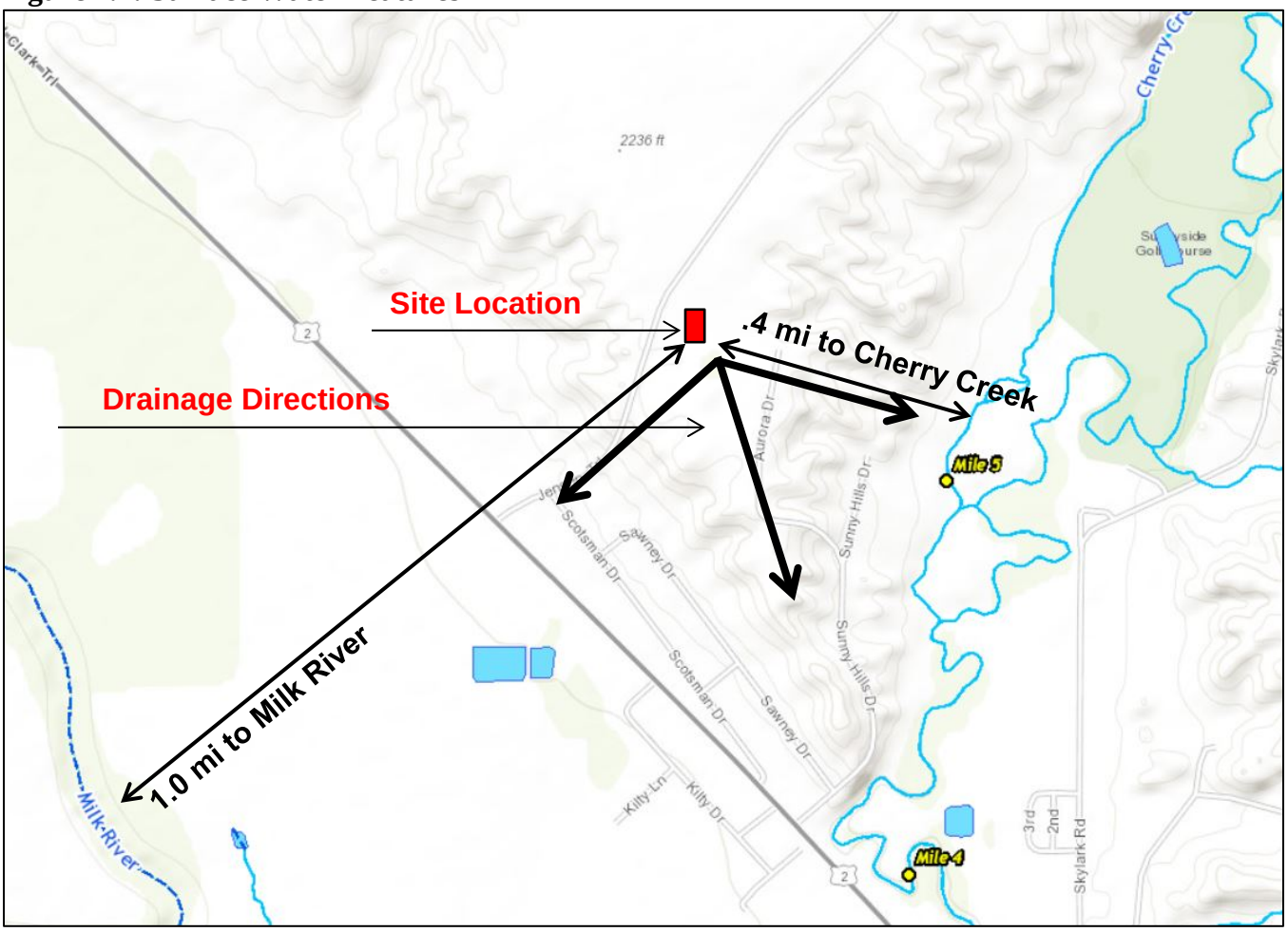
wetland or standing water is located on the plateau where the proposed site is located.

The area to be used for land application is located approximately one-half mile west of Cherry Creek and one mile from the nearest bend of the Milk River. There is a seasonal ponding area to the southeast of the land application site approximately 350 feet from the boundary of the land application area. The pumper will maintain the required setback distance from this ponding area, disperse the wastes using a splash plate, and incorporate all wastes within six hours of application to ensure there are no impacts to surface water. Septage will not be applied to land within 150 feet of the high water mark of any state surface water, including intermittent drainages, irrigation canals, and wetlands. The average annual runoff in this part of Montana is only one inch per year. As a result, there is no additional anticipated impact to surface water from the proposed land application activities.

Groundwater

Groundwater underlying the Glasgow area is located in Cretaceous deposits of the Bearpaw Formation that consist mainly of siltstone, mudstone, claystone, and shale, with minor amounts of bedded and nodular concretions, and thin beds of bentonite. Groundwater in these deposits occurs under both confined and unconfined conditions. According to the Montana Bureau of Mines and Geology, Groundwater Information Center (GWIC) database, groundwater is located in this area at an average elevation of 2,084 feet above sea level. This is determined by calculating the elevation of the static water level of the four wells documented to be within one-half mile of the proposed land application site. The proposed site location sits at 2,228 feet above sea level. This leaves a layer of Cretaceous deposits approximately one hundred and forty-five feet thick between the ground surface and the groundwater static water level.

Figure 4.1: Surface Water Features



Nearby Groundwater Supply Wells

The GWIC database identifies four water wells within one-half mile of the proposed land application site. The GWIC database locates wells by section and identified twenty-eight wells in Section 33. For our understanding of the area, DEQ used the four wells located closer than one-half mile of the proposed land application site (Figure 4.2).

Table 4.2 summarizes the well information for the wells that were identified within the vicinity of the proposed land application site. Because the data in GWIC is based on well drillers' records, the details are not field verified for accuracy. Further, the GWIC database contains well information only for those drilling records that have been submitted; there may be additional wells in the area that are not contained in the database because the records have not been submitted to GWIC. Therefore, this analysis is based only on information contained in the GWIC database.

According to GWIC, Section 28 contains one GWIC-documented domestic well within one half mile of the proposed land application site. Section 33 has three GWIC-documented wells within one half mile, with one of them being a domestic well and two being irrigation wells. The well in Section 28 was drilled in 1953 and is reported to be 417 feet deep. The static water level at completion of the well was 125 feet below ground surface. The domestic well in Section 33 was drilled in 1954 and is reported to

be 300 feet deep with a static water level at completion of 23 feet below ground surface. The irrigation well in Section 33 (GWIC well number 250589) was drilled in October 2008 and was reported to be 250 feet deep with a static water level at completion of 75 feet below ground surface. The fourth well located within onehalf mile of the proposed site is GWIC well number 274326. This is an irrigation well that was drilled in July 2013 to a total depth of 375 feet and a reported static water level at completion of 150 feet below ground surface.

Septage will be land applied in a wide, thin, even layer at rate not exceeding the AAR, and will be incorporated into the soil surface plow layer within six hours of application. As required, static water levels are greater than six feet below ground surface (ARM 17.50.809(8)). There is no anticipated impact to the groundwater or groundwater supply wells as a result of the proposed land application activities.

Figure 4.2: Location of Water Supply wells within 0.5 miles
(Site application boundary outlined in red, wells in blue circles, well # in blue box)

Table 4.2: Summary of Nearby Wells

Township	Range	Section	Well Number	Total Depth	Static Water Level	Date Drilled	Use	Ground Surface Elevation
29N	39E	28	41083	417	125	April, 1953	Domestic	2230
29N	39E	33	41099	300	23	June, 1954	Domestic	2110
29N	39E	33	250589	250	75	October, 2008	Irrigation	2170
29N	39E	33	274326	425	150	July, 2013	Irrigation	2200

(Source: Montana Bureau of Mines and Geology, Ground Water Information Center)
The total depth column is the depth drilled, which may be deeper than the bottom of the well as completed. Static water level is the level of water measured in the well at the time of installation. All data is based upon the driller's logs and may not be reported for every well.

3.0 Geology

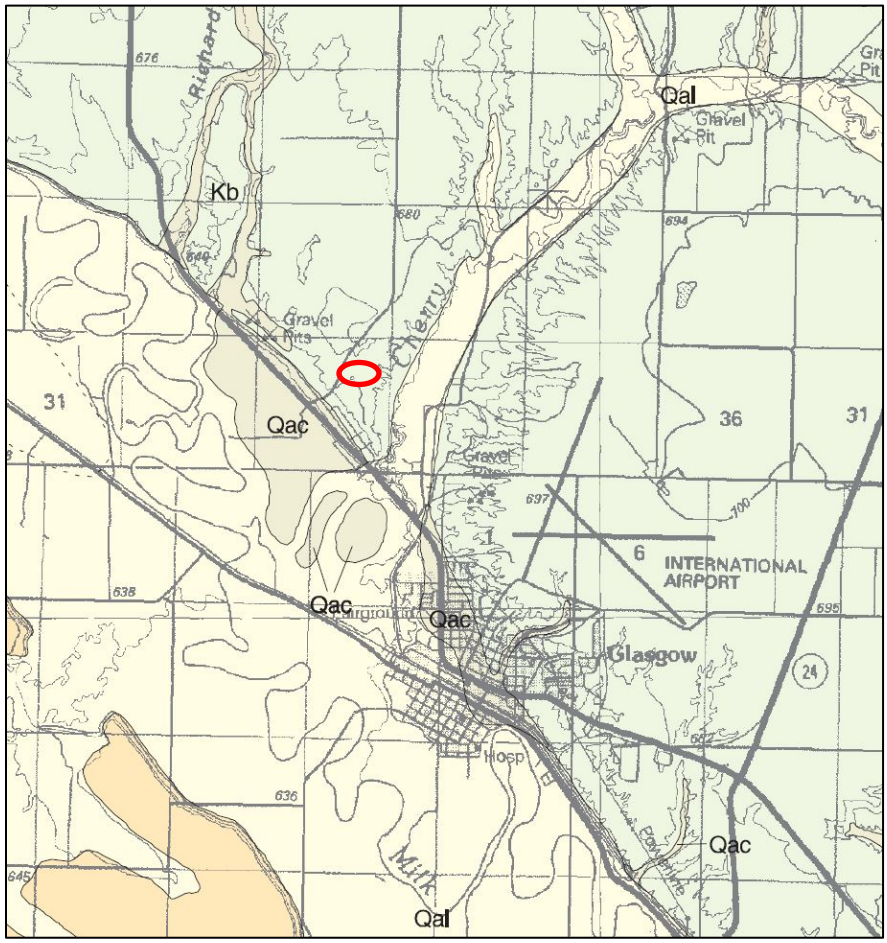
The proposed land application site is located in northeastern Montana, northwest of the City of Glasgow. Four major glacial advances occurred during the Pleistocene Epoch (10,000-2 million years ago) and during these times, glacial ice covered the northern part of Montana, including this area. As the ice advanced and retreated, glacial meltwater and runoff transported sediments throughout the region. The ice sheets formed the current topography that we see today as well as the current location of the Milk and Missouri Rivers. From this, the current ground cover can be described as Quaternary alluvium and colluvium deposits. These sediments were deposited from nearby rivers, lakes, or the glacial advances described above, and also as the sediments were washed downslope by rain wash or downslope creep. Location of these deposits can be seen in Figure 4.3. The area north of Milk River where the site is located is underlain by the Bearpaw Formation. The formation was created by the advancing and retreating of the intercontinental sea during the Campanian Age. The deposits from this event include grey shales, claystones, siltstones, and mudstones. Other nearby deposits are from the Judith River Formation which sits directly below the Bearpaw Formation and consists of sandstone, mudstone, and siltstone.

There is no anticipated impact to the geology in the area from the proposed land application activities.

4.0 Soil Quality – Stability & Moisture

The soil types at the proposed land application site are classified as the Thoeny-Phillips complex on 1 - 5% slopes. The typical profile of Thoeny is 7 inches of loam that overlies 7 - 12 inches of clay. Berneath the clay is 12-60 inches of a clay loam. Theony soils are well-drained with moderately low to very low water capacities. The available water storage is considered moderate at about 7.5 inches. The Phillips is very similar to Theony, in that it is common in these till plains. The typical profile of Phillips consists of 5 inches of loam, 5 - 12 inches of clay, and clay loam to a depth of at least 60 inches. It is also well drained, but has moderately low to moderately high water capacity: it can store up to 9 inches of water. This means that these soils are well suited for land application due to good drainage and infiltration, and the ability for water to soak in at a moderate rate. The annual precipitation in this area is only 10-14 inches so these soils will have adequate time to soak in the septage and not have any issues with runoff. The land application of septage at the proposed location will have a positive minor impact on soils by adding organic matter and nutrients for plant uptake.

Figure 4.3: General Site Geology Map (Site location is in Red)



Kb	**Bearpaw Formation**
Qac	**Alluvium & Colluvium**
Qal	**Modern Alluvium**

(Source:Montana Bureau of Mines and Geology, Geologic map, Glasgow 30'x60' Quadrangle, Bergantino, 1999.)

5.0 Vegetation Cover, Quantity, and Quality

The quantity and quality of the vegetative cover will be enhanced by the proposed land application activities. When properly managed, septage is a resource that is used as a valuable soil conditioner which contains nutrients. This can reduce reliance on chemical fertilizers for agriculture. A good land application program recognizes the potential benefits of septage and employs practices to maximize these benefits. The acreage available for land application will be rotated on an annual basis, so that parcels used one year will be inactive the next year. This rotation allows the vegetation or crop of choice to utilize the nitrogen and other nutrients added from the land application process. When applied as a soil conditioner, septage provides benefits to agricultural land by the addition of moisture, organic matter, and nutrients to the soil without adversely affecting public health. The land application of septage, portable toilet waste, sump pumpings, and graywater at this site will have a positive minor impact on the site from the addition of nutrients and moisture. The organic matter added from the proposed activity will also improve the soil tilth for the continued production and enhancement of the pasture grasses.

6.0 Aesthetics

This proposed land application site is on dryland pasture with no animals grazing. It is not located on a prominent topographical feature, nor is it visible from a highly populated area, although there are homes located to the southeast of the parcel. The application of septage is similar to the day to day activities of farming and ranching in the area and will not cause a change in the overall aesthetics of the area.

The land application site is not deemed a public nuisance. According to Montana Code Annotated (MCA), Section 27-30-101, a public nuisance is defined as: *(1) Anything that is injurious to health, indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property, or that unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake, river, bay, stream, canal, or basin or any public park, square, street, or highway is a nuisance. (2) Nothing that is done or maintained under the express authority of a statue may be deemed a public or private nuisance.* The Department of Environmental Quality authorizes and regulates these activities through licensure and the activity is therefore not a public nuisance.

B&B Pumping's land application activities on the S+J Cattle property is limited to 15,000 gallons of septage and 4,000 gallons of portable toilet waste per year. The site will only be used when the Valley County Landfill is either closed or inaccessible due to inclement weather or site conditions.

Odors will be minimized with proper site management. While the presence of odors may be detectable during the land application activity, these odors are typically only detectable within close proximity of the site activity. The natural soil bacteria use the carbon in the waste as a fuel source. This activity results in the breakdown of wastes, including odors. Winds are typical in the Glasgow area and will also disperse odors resulting from land application activities quickly. Although DEQ does not regulate odors, the presence of odors outside the land application area could mean that wastes have been over-applied or not incorporated as required. DEQ and/or the local county sanitarian would respond to odor complaints to determine if wastes have not been properly managed. There are no anticipated additional impacts to the aesthetics as a result of the land application activities.

8.0 Unique, Endangered, Fragile, or Limited Environmental Resources

A search of the Montana Natural Heritage Program indicated the Townsend Big-eared Bat, Black-tailed Prairie Dog, Hoary Bat, Black-footed Ferret, Little Brown Myotis, Pygmy Shrew, Merriam's Shrew, Preble's Shrew, and Swift Fox are mammals that are considered species of concern in Valley County.

The Baird's Sparrow, Nelson's Sparrow, Sprague's Pipit, Golden Eagle, Great Blue Heron, Burrowing Owl, American Bittern, Ferruginous Hawk, Chesnut-collared Longspur, Greater Sage-Grouse, Piping Plover, Mountain Plover, Black-billed Cuckoo, Bobolink, Caspian Tern, Loggerhad Shrike, Red-headed Woodpecker, Long-billed Curlew, Sage Thrasher, Green-tailed Towhee, McCown's Longspur, Brewer's Sparrow, Common Tern, and the Least Tern are considered bird species of concern in Valley county.

Reptiles of concern in this area include the Plains Hog-nosed Snake and the Greater Short-horned Lizard. Because there are no wetlands or permanent surface water bodies near the proposed site, amphibians and fish have been dismissed from this list.

The five plant species of concern listed for Valley County consist of the Scarlett Ammannia, Chaffweed, Bractless Blazingstar, Hot Spring Phacelia, and the Platte Cinquefoil.

Designation as a species of concern is not a statutory or regulatory classification. Instead, these designations provide a basis for resource managers and decision makers to make proactive decisions regarding species conservation. An intensive site survey was not conducted to verify the presence of, or impact to, sensitive, unique, endangered, or fragile species within or adjacent to the proposed land application site because the site is currently used for pasture and dumping of car wash waste. Therefore, it is unlikely that these species have made a permanent residence on the areas proposed for land application. As a result of the limited development and lack of human population in the area, there remains adequate acreage of similar habitat available in the vicinity of the proposed site to accommodate any species that would have been forced to relocate due to the current activities. Therefore, no additional impact to resources are anticipated as a result of the proposed land application activities.

Table 4.3: Potential Impacts of the Proposed Land Application Site on the Human Environment

HUMAN ENVIRONMENT	Major	Moderate	Minor	None	Unknown	Attached
1. Social Structures & Mores:				✔		
2. Cultural Uniqueness & Diversity:				✔		
3. Density & Distribution or Population & Housing:				✔		
1. Human Health & Safety:				✔		✔
5. Community & Personal Income:				✔		
6. Quantity & Distribution of Employment:				✔		
7. Local & State Tax Base Revenues:				✔		
8. Deman for Government Services:						✔
9. Industrial, Commercial, & Agricultural Activities, & Production:				✔		
10. Access to & Quality of Recreational & Wilderness Activities:				✔		
11. Locally Adopted Environmental Plans & Goals:				✔		
12. Transportation:				✔		✔

Analysis of Table 4.3: Potential Impacts of the Proposed Land Application Site on the Human Environment

This section evaluates the potential environmental effects that may occur on the human environment if the proposed facility is approved. The number on each of the underlined resource headings corresponds to the resource listed in the table. Generally, only those resources potentially affected by the proposal are discussed. Therefore, if there is no effect on a resource, it may not be discussed.

4.0 Human Health & Safety

The septage, portable toilet waste, sump pumpings, and graywater will be land applied at the site on an as needed basis using a dispersive mechanism. The dispersive mechanism applies the waste in a wide, thin, even layer at a beneficial rate. Septage will be incorporated into the soil surface plow layer with a tractor and tillage equipment within six hours of application. In addition, all non-putrescible litter will be removed within six hours of application.

The land application area is located on private property. Public access into the site is controlled by multi-strand barbed wire fence. There are no additional human health and safety concerns when the site is operated in accordance with the Septage Disposal regulations. Therefore, there are no additional impacts on human health and safety anticipated as a result of land application activities.

8.0 Demand for Government Services

The Valley County Sanitarian and DEQ Solid Waste Section will conduct periodic inspections of land application activities at the site. Volumes of waste applied at the site from the land application process will also be monitored to ensure that the AAR is not exceeded. Site inspections are a common, regular activity DEQ performs for all solid waste and septic tank pumper locations. Therefore, there is a minor impact to the demand for government services.

12.0 Transportation

The proposed land application site will be accessed off of Jensen Trail, a road on the northeast side of Highway 2. Jensen Trail currently supports traffic to rural homes, farms, and ranches; including heavy equipment associated with the current agricultural activities in the area. The applicant has secured an agreement with the landowner allowing access to the land application site. The site will be used by the applicant on an as needed basis and will not cause a significant increase in traffic on Jensen Trail. There are no additional impacts to transportation anticipated as a result of the proposed land application activities.

SECTION 5.0 CONCLUSIONS AND RECOMMENDATIONS

Evaluation of mitigation, stipulations, and other controls enforceable by the agency or another government agency:

The proposed land application site and Operation and Maintenance (O&M) Plan will meet the requirements of the Montana Septage Disposal and Licensure Law, Air and Water Quality Acts, and other applicable Montana environmental laws and regulations, as well as county ordinances. Adherence to the regulations and the approved O&M Plan will mitigate the potential for harmful releases and impacts to human health and the environment by the proposed activity at the site.

Findings:
MEPA requires State agencies to conduct an environmental review when making decision or planning activities that may have a significant impact on the environment. MEPA and the administrative rules promulgated under MEPA define the process to be followed when conducting an environmental review. The Draft and Final EA that DEQ prepared in regard to B&B Pumping's application for approval of a new land application site complies with the procedural requirements of MEPA.

The Septage Disposal - Licensure Law (SDLL) recognizes that the health and welfare of Montana citizens is endangered by improperly operated and unregulated disposal of wastes. The SDLL and associated Administrative Rules regulate septic tank pumpers and land application sites to protect the public health and safety and to conserve natural resources whenever possible (Section 75-10-202, MCA). The basic objective of the land application site approval is to establish a site for the on going disposal of septage that provides nutrients, moisture, and organic matter to soils that will enhance vegetative growth.

The site will be operated according to the SDLL and Administrative Rules for land application. The applicant will submit disposal records recording the dates and times of land application and incorporation and the general areas where septage is applied on the site. The site will also be inspected on a regular basis to verify compliance with the SDLL.

Other groups or agencies contacted or which may have over-lapping jurisdiction:
Valley County Environmental Health Department

Individuals or groups contributing to this EA:
Bryce Lawrence of B&B Pumping
United States Department of Agriculture
Montana Natural Heritage Program
Montana Department of Environmental Quality
Montana Historical Society State Historic Preservation Office
United States Geological Survey
Montana Bureau of Mines and Geology

References:
Western Regional Climate Center, wrcc@dri.edu

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Public Land Survey System, Township and Range, Google Earth.
http://www.earthpoint.us/Townships.aspx

Source Water Delineation and Assessment Report, 2004

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Date: February 22, 2017